

ABSTRACT OF THE DISCLOSURE

The semiconductor device comprises a lower interconnection part 12 which is formed on a silicon substrate 10 and includes an inter-layer insulation film 36 formed of a low-k film 32 and a hydrophilic insulation film 34 formed on the low-k film 32, and an interconnection layer 44a, 44b buried in interconnection trenches 38a, 38b formed in the inter-layer insulation film 36 and having an interconnection pitch which is a first pitch; and an intermediate interconnection part 14 which is formed on the lower interconnection part 12 and includes an inter-layer insulation film 142 formed of low-k films 136, 140, an interconnection layer 152a, 152b buried in interconnection trenches 146a, 146b formed in the inter-layer insulation film 142 and having an interconnection pitch which is a second pitch larger than the first pitch, and an SiC film 154 formed directly on the low-k film 140 and the interconnection layer 152a, 152b.